

CLAIMS

- 5 1. A system for facilitating the comprehension of a target language, or the learning of a target language, or both simultaneously,
wherein
- said target language can be a foreign language or a native language,
 - said target language can be oral or signed,
 - said system is applied over one or more samples of such target language,
- 10 said system comprising means to provide one or more perspectives over the structure of one or more fragments of said target language samples, which can facilitate that the user learner comprehends the structure and meaning of said fragments.
- wherein said perspectives can be created in a plurality of manners, such as for example on a paper document, on an electronic document accessible on a computer screen, on a
- 15 television, on a computer screen under the control of a program, on a computer screen under the control of a program and with the interaction by the user learner, or in some other fashion.
- 20 2. A system as claimed in claim 1, wherein said means comprise hardware means, which can exist in a one single platform or in two different platforms, one for the tutor and the other one for the user learner.
- 25 3. A system as claimed in claim 1, wherein said structure of said fragments is defined over a number of groups of words that compose said fragments, where said groups of words will generally be phrases and are called chosen phrases.
- 30 4. A system as claimed in claims 3 and 1, wherein at least one of said perspectives comprises means to identify and select the minimal chosen phrase of a position, where the minimal chosen phrase of a position is the chosen phrase that covers that position and that does not contain any other chosen phrase that covers that position.
- 35 5. A system as claimed in claims 3 and 1, wherein at least one of said perspectives comprises means to identify and select the chosen phrase that is the parent of the chosen phrase that is selected at a given moment.

- 5 6. A system as claimed in claims 3 and 1, further comprising means for collapsing or expanding chosen phrases, where said collapsing produces the effect that the collapsed phrase has a different representation in some of said perspectives, and said expanding produces the effect that the chosen phrase has a normal representation in said perspectives, where the representation of said chosen phrases depends on the nature of each of said perspectives.
- 10 7. A system as claimed in claims 3 and 1, wherein it is possible to enable and disable different types of phrases, where such disabling produces the effect that said chosen phrases that are disabled do not appear as phrases in said perspectives.
- 15 8. A system as claimed in claim 1, further comprising means for assigning, in at least one of said perspectives, one or more replacing words to different groups of words of said fragments, so it will be possible to represent said fragments in said perspectives in such a way that said replacing words will be in the place of those groups of words to which they are assigned.
- 20 9. A system as claimed in claim 8, wherein there exist different types of replacing words for different types of groups of words, so that, for example, the groups of words that correspond to relative clauses might have a type of replacing word and the groups of words that are clauses of other type might have other type of replacing word.
- 25 10. A system as claimed in claim 8, wherein said replacing words are words that do not exist in the target language, and where in they have been assigned an alphanumeric index such as for example "XYZ1" or "ABCD#1.
- 30 11. A system as claimed in claim 8, further comprising means for replacing said replacing words by the groups of words to which they are assigned, in at least one of said perspectives and in a fragment in which they appear.
- 35 12. A system as claimed in claims 3 and 1, wherein, for one or more of said chosen phrases, said system comprises one or more clarifications that provide information about said chosen phrases, where said clarifications can be shown in different fashion in said perspectives.
13. A system as claimed in claim 12, further comprising a clarification 3 for clause phrases, where said clarification 3 is the same character string as said phrase except for the fact

that it has been modified to convert it into a sentence that has the normal order of the target language.

- 5 14. A system as claimed in claim 12, further comprising a clarification 4 for those clause phrases whose main verb is not in indicative mode, where such clarification 4 is the same character string as said phrase, or as its clarification 3 if it exists, except for the fact that the main verb has been replace by the infinitive form of said main verb.
- 10 15. A system as claimed in claim 1, wherein one of said perspectives shows the escalator tree of said text fragment, where said escalator tree is the arrangement of said text fragment in different rows.
- 15 16. A system as claimed in claim 15, wherein said escalator tree is built by using text controls that represent the same text fragment, wherein some groups of words in some controls have the same color as the background color, so that they give the impression that said groups of words do not exist.
- 20 17. A system as claimed in claims 15, wherein the levels of different words are assigned independently from the embedding level of said words in the phrase tree of the text to which they belong.
- 25 18. A system as claimed in claim 15, wherein the levels of the words in the escalator tree are codified by the utilization of special delimiter characters in said text fragment, so that some characters indicate a change of level, and others do not indicate a change of level, where there might be different types of delimiter characters if it necessary to indicate level changes that have different magnitudes.
- 30 19. A system as claimed in claim 1, wherein one of said perspectives shows the tower tree or the informative tree of the fragment, where said trees are an arrangement in the form of a table in which the chosen phrases are arranged vertically, and it optionally has additional cells to show additional information, such as for example the clarifications of each chosen phrase.

20. A system as claimed in claim 1, wherein one of said perspectives show the grammatical perspective of said fragment, wherein the grammatical perspective is an arrangement in table form, so that different portions of such fragment that fulfill different grammatical function occupy different cells.

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21. A system as claimed in claim 1, wherein one of said perspectives is an audiovisual perspective, which is characterized because it aurally plays back a portion that has been chosen on said fragment, wherein emphasis has been applied on some parts of it that have been chosen by the user.

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22. A method for facilitating the comprehension of a target language, or the learning of a target language, or both simultaneously, wherein

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- said target language can be a foreign language or a native language,
- said target language can be oral or signed,
- said method is applied over one or more samples of such target language,

said method comprising the step of providing one or more perspectives over the structure of one or more fragments of said target language samples, which can facilitate that the user learner comprehends the structure and meaning of said fragments.

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23. A method as claimed in claim 22, wherein said structure of said fragments is defined over a number of groups of words that compose said fragments, where said groups of words will generally be phrases and are called chosen phrases.

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24. A method as claimed in claims 23 and 22, further comprising, in at least one of said perspectives, the step of identifying and selecting the minimal chosen phrase of a position, where the minimal chosen phrase of a position is the chosen phrase that covers that position and that does not contain any other chosen phrase that covers that position.

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25. A method as claimed in claims 23 and 22, further comprising the step of, in at least one of said perspectives, identifying and selecting the chosen phrase that is the parent of the chosen phrase that is selected at a given moment.

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26. A method as claimed in claims 23 and 22, further comprising the step of collapsing or expanding chosen phrases, where said collapsing produces the effect that the collapsed phrase has a different representation in some of said perspectives, and said expanding produces the effect that the chosen phrase has a normal representation in said

perspectives, where the representation of said chosen phrases depends on the nature of each of said perspectives.

- 5 27. A method as claimed in claims 23 and 22, further comprising the step of enabling and disabling different types of phrases, where such disabling produces the effect that said chosen phrases that are disabled do not appear as phrases in said perspectives.
- 10 28. A method as claimed in claim 22, further comprising the step of assigning, in at least one of said perspectives, one or more replacing words to different groups of words of said fragments, so it will be possible to represent said fragments in said perspectives in such a way that said replacing words will be in the place of those groups of words to which they are assigned.
- 15 29. A method as claimed in claim 28, further comprising the step of choosing different types of replacing words for different types of groups of words, so that, for example, the groups of words that correspond to relative clauses might have a type of replacing word and the groups of words that are clauses of other type might have other type of replacing word.
- 20 30. A method as claimed in claim 28, wherein said replacing words are words that do not exist in the target language, and where in they have been assigned an alphanumeric index such as for example "XYZ1" or "ABCD#1.
- 25 31. A method as claimed in claim 28, further comprising the step of replacing said replacing words by the groups of words to which they are assigned, in at least one of said perspectives and in a fragment in which they appear.
- 30 32. A method as claimed in claims 23 and 22, wherein, for one or more of said chosen phrases, said method comprises the step of visualizing one or more clarifications that provide information about said chosen phrases, where said clarifications can be shown in different fashion in said perspectives.
- 35 33. A method as claimed in claim 32, further comprising the step of visualizing a clarification 3 for clause phrases, where said clarification 3 is the same character string as said phrase except for the fact that it has been modified to convert it into a sentence that has the normal order of the target language.

- 5 34. A method as claimed in claim 32, further comprising the step of visualizing a clarification
4 for those clause phrases whose main verb is not in indicative mode, where such
clarification 4 is the same character string as said phrase, or as its clarification 3 if it
exists, except for the fact that the main verb has been replace by the infinitive form of
said main verb.
- 10 35. A method as claimed in claim 22, further comprising the step of showing, in one of said
perspectives, the escalator tree of said text fragment, where said escalator tree is the
arrangement of said text fragment in different rows.
- 15 36. A method as claimed in claim 35, wherein the levels of different words are assigned
independently from the embedding level of said words in the phrase tree of the text to
which they belong.
- 20 37. A method as claimed in claim 35, wherein the levels of the words in the escalator tree are
codified by the utilization of special delimiter characters in said text fragment, so that
some characters indicate a change of level, and others do not indicate a change of level,
where there might be different types of delimiter characters if it necessary to indicate
level changes that have different magnitudes.
- 25 38. A method as claimed in claim 22, further comprising the step of showing, in one of said
perspectives, the tower tree or the informative tree of the fragment, where said trees are
an arrangement in the form of a table in which the chosen phrases are arranged vertically,
and it optionally has additional cells to show additional information, such as for example
the clarifications of each chosen phrase.
- 30 39. A method as claimed in claim 22, further comprising the step of showing, in one of said
perspectives, the grammatical perspective of said fragment, wherein the grammatical
perspective is an arrangement in table form, so that different portions of such fragment
that fulfill different grammatical function occupy different cells.
- 35 40. A method as claimed in claim 22, further comprising the step of perceiving, in one of said
perspectives, and audiovisual perspective, which is characterized because it aurally plays
back a portion that has been chosen on said fragment, wherein emphasis has been applied
on some parts of it that have been chosen by the user.

41. A data collection that allows to implement the system of one or more of the claims 1 to 21.

5 42. A data collection that allows to implement the method of one or more of the claims 22 to 40.

43. An object readable by a computer that contains one of the data collections of the claims 41 to 42.

10 44. A computer program that allows to implement the system of one or more of the claims 1 to 21.

45. A computer program that allows to implement the method of one or more of the claims 22 to 40.

15 46. An object readable by a computer that contains one of the computer programs of the claims 44 to 45.

SUMMARY

“System, method, computer program and content data for facilitating the comprehension of languages and/or the learning of languages”

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The present invention provides assistance for a person to better comprehend the samples of a target language and, simultaneously, it facilitates that the person learns that language better. In order to do that, some special perspectives on those language samples are provided, and those perspectives show in a simple form the internal structure of said samples. All this will facilitate the person the assimilation of the structure and meaning of those language samples.

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The invention is based on two facts. First, linguistic research has show that language comprehension depends on the assimilation of the internal structure of the messages that are received. Second, language learning require the learner to comprehend messages of that language in order to be able to develop the competence to associate meaning and form.

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